Gender diversity and corporate sustainability performance: empirical evidence from India

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Abstract

Purpose – This study aims to attempt to evaluate and establish the relationship between gender diversity (GD) on the board and corporate sustainability performance.

Design/methodology/approach – A sample of 212 non-financial companies listed on the National Stock Exchange has been considered for a period of 2013–2014 to 2018–2019. For the purpose of the analysis, this study has conducted the static panel data model analysis and also some diagnostics tests to arrive at robust results.

Findings – This study, from its analysis, interprets that GD or the proportion of women directors in the company plays a significant role in the decisions related to the sustainability performance of the company. Alongside GD, the profitability of the company, measured in terms of Tobin's Q, and firm size are also seen to have a positive impact on the sustainability performance of the company.

Practical implications – This study from its findings contributes to the existing works of literature by highlighting the impact of GD on the sustainability performance of the firm. This study thus recommends the recruitment of an ample number of females in the top-notch positions of the board to create a gender-diverse management team to reap the benefits of leadership styles of both genders.

Originality/value – Very few studies have been conducted on the dynamics of women's directorship, especially in an emerging economy like India. This study thus tries to fill this important gap in the literature by examining the relationship between board GD and sustainability performance of Indian firms.

Keywords Corporate sustainability, Panel data analysis, Firm value, Women directorship

Paper type Research paper

1. Introduction

The fast-paced progress and growth of the Indian economy in the fields of industrialisation, infrastructure, business, commerce and trade has taken a toll on the environmental and social system of the country. However, the Indian corporates have shared these concerns with the government and come up with new environmental-friendly innovations and technologies to cope up with this disaster at stake. The government is also bringing out new policies and legislations such as clause 135 in Companies Act (2013) regarding corporate social responsibility (CSR), Corporate Responsibility for Environmental Protection proposed by the Central Pollution Control Board of India, National Voluntary Guidelines on Social, Environmental and Economic Responsibilities released in 2011 by the Ministry of Corporate

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Affairs, etc. The involvement of the board in integrating sustainability practices in their core activities and processes has aroused several questions in the mind of researchers and academicians regarding its role and contribution to the corporate sustainability of the firm.

The board of the company is responsible for all the crucial decisions and resolutions taking place in the organisation. Board diversity, an important dimension of the board, has enormous potential in substantially influencing the board's actions and subsequently the sustainability performance of the companies. The new amendments in terms of section 149 as brought in the Companies Act (2013) have mandated the presence of at least one women director in the board of the companies. It has thus highlighted the role of gender diversity (GD) in the decision-making process of the companies.

Although women directorship is a recent phenomenon in the Indian corporates, tracing its path from mandating certain sections in the Companies Act (2013), the theoretical background justifying the relationship between the presence of female director and sustainability can be found in a number of theories. The well-established and propounded stakeholder and resource dependence theory argue that GD in the board of the company can pressurise the organisations in adopting various environmental and sustainable practices to meet the shareholders' expectations and demand (Elmagrhi *et al.*, 2018). On the other hand, the legitimacy theory promulgates the use of voluntary disclosures and practices as an important mechanism to enhance the image and reputation of the organisation within the society and to establish their legitimacy (Nurhayati *et al.*, 2015).

The women directors are considered to have a favourable take on the environmental (Ben-Amar *et al.*, 2017), social (Alazzani *et al.*, 2017) and overall sustainable (Al-Shaer and Zaman, 2016) concerns of the organisation. The traits that these women directors bring on the board with themselves such as emotionality, empathy along with their knowledge and competence bring a feministic transformational approach to the decision-making on the board. The women on board promote investments in socially responsible activities and other various long-term sustainability projects (Galbreath, 2011). The participation of women in the decision-making process of the board helps in bringing additional benefits such as fresh notions, supplementary knowledge, better problem-solving strategies, etc. (Arfken *et al.*, 2004).

In the backdrop of these theoretical frameworks, the study attempts to evaluate and establish the relationship between the GD on the board and the corporate sustainability performance of the listed Indian companies over a period of six years, from 2013–2014 to 2018–2019.

2. Literature review and hypothesis development

The previous studies in the field of corporate governance and its relationship with firm characteristics have been mainly on the effect of corporate governance on corporate financial performance. Studies exist less about how certain specific board attributes like the presence of female directors on the board could affect the sustainability performance of the corporates. However, of late the GD and board composition are emerging as an important phenomenon in modern organisation and corporations (Kang *et al.*, 2007).

The relationship between the presence of women directors on the board and the level of corporate sustainability in the firm has been supported by various theories in the past literature. The agency theory postulates that GD enhances board independence and its effectiveness by increased monitoring in the opportunistic behaviour of management and reducing agency problems (Jensen and Meckling, 1976) which results in improved corporate sustainable performance (Elmagrhi *et al.*, 2018). Also, the stakeholder and resource dependency theory suggests that GD tends to increase the pressure on the firm to undertake

various socially responsible environmental practices so as to meet the stakeholder's expectations (Elmagrhi *et al.*, 2018). Therefore, the women directors are supposed to favourably increase the environmental, social and corporate sustainable performance of the firm (Al-Shaer and Zaman, 2016). The resource dependency theory also suggests that a gender-diverse board enjoys a mix of resources that improves its operational as well as social performance (Ali *et al.*, 2014). In addition, legitimacy and neo-institutional theories also advocate that the presence of female directors on the board improves the reputation and goodwill of the firms due to the increase in their accountability and commitment towards the society and environment in general (Soobaroyen and Ntim, 2013). Thus, various theories propagate the economic as well as the wider public and social benefit that can be attained from increasing the GD in the firm in respect of its environmental and social performance.

The importance of GD in the company's economic, social and environmental performance and value creation has been emphasized by many empirical studies as well (Chapple and Humphrey, 2013; Abdullah *et al.*, 2016; Eulerich *et al.*, 2014; Elmagrhi *et al.*, 2018). It is evident enough that a higher percentage of women on board increases shareholder confidence by offering a higher level of transparency, efficient monitoring and accountability (Galbreath, 2011). Another study by Fernandez-Feijoo *et al.* (2012) on the KPMG countries discloses that boards with three or more women directors supposedly reveal better quality of CSR information and other assurance statements reports. This finding is supported by Ben-Amar *et al.* (2017) that GD among Canadian companies boosts its effectiveness in stakeholder management and promotes sustainability initiatives by increasing climate change and greenhouse gas (GHG) emission disclosures. Similarly, Al-Shaer and Zaman (2016) find that the number of female board members is positively linked with the sustainability reporting among 333 companies listed in the UK FTSE350. On the other hand, Rosener (1995) highlights the skills and ability of women to handle conflict or uncertainty proving them to be skillful problem-solvers. Women are more effective and efficient in catering to the needs of different stakeholders of the organisation (Hillman *et al.*, 2002) and more focussed on the social and ethical issues of the company (Huse *et al.*, 2009; Huse and Solberg, 2006; Bear *et al.*, 2010). Likewise, Kassinis *et al.* (2016) in a study of 296 US publicly traded firms observe that the presence of women directors on the board has a positive impact on the environmental performance of the corporates. They identify highlighted skill sets such as risk aversion, rationality, sturdier ethical attitudes, due diligence in decision-making and more complex relational abilities behind their observation. It is further seen in other research studies that the increase in the number of women directors on the board increases the corporate social behaviour of a firm. Bernardi and Threadgill (2011) report that more "socially responsible" factors like charity, community involvement and recognition of the employee benefits.

However, certain studies (Amran *et al.*, 2014; Boulouta, 2013; Glass *et al.*, 2015) did not find any significant relationship between the number of women directors on board and corporate performance, financial and non-financial. Among several other reasons, the most frequently quoted reason is the under-representation of women on the board as compared to their male counterparts (Amran *et al.*, 2014; Galbreath, 2011). Further, it was reported that the stereotyping biases are faced by the women directors owing to their gender inhibits in influencing the decisions of the board. Another noteworthy point is that the women directorship being a new phenomenon in the board leads to a dearth in the participation of women on the board (Khan, 2010). This also does not give them sufficient power or resources to influence the organisation's decision-making process (Kagzi and Guha, 2018).

After going through several pieces of literature both in the national and international context, it can be concluded that the relationship between GD on the board and the

sustainability performance of the companies have provided us with mixed results and inconclusive findings. Moreover, previous studies have considered only the analysis of annual reports of the companies to gather information for the research overlooking other additional and supplementary reports such as sustainability reports, director reports, etc. (Galbreath, 2011). Also, the measurement of the sustainability performance of the companies requires an in-depth analysis of all the parameters undertaken, and an overview analysis of the same would not provide us with robust results (Al-Shaer and Zaman, 2016). Another important limitation of previous studies is the use of outdated and erratic statistical techniques and econometric tests without dwelling into endogeneity and causality related properties among the variables (Jindal and Jaiswall, 2015). Under this backdrop, the present study proposes the following hypothesis:

H1. There exists a positive relationship between gender diversity on the board on the corporate sustainability performance of the firm.

3. Data and methodology

3.1 Sample design

The study considers a sample of 212 companies from the National Stock Exchange (NSE) 500 indexed companies. The NSE 500 index is an Indian capital market's broad-based benchmark that represents about 96.1 percentage of the free-float market capitalization of the stocks listed on the NSE. Further, banking companies, financial sector companies and companies with inadequate data are removed from the NSE 500 sample owing to their different set of regulations and capital structure requirements in conformity with previous studies, leaving us with a sample of 212 companies for the study. The entire data from 2013–2014 to 2018–2019 have been collected from various sources such as financial databases, namely, "Prowess" and "Capitaline Plus" marketed and maintained by the Centre for Monitoring Indian Economy Pvt. Ltd. and Capital Market Publishers Pvt. Ltd., respectively, as well as the website of respective sampled companies and global reporting initiative, etc. The study also takes into account the sustainability and other additional reports of the companies for analysis of the environmental, social and governance (ESG) score.

3.2 Description of variables

3.2.1 Corporate sustainability. Corporate sustainability performance, the dependent variable of the study, is calculated as the ESG score. This score is a composite score index describing the disclosure activities of the corporates related to its ESG activities such as GHG emissions, etc.

3.2.2 Gender diversity. The independent variable for the study is taken as GD, which is supported by various previous literature and theories (Fernandez-Feijoo *et al.*, 2012; Jindal and Jaiswall, 2015). GD is measured by taking the proportion of the number of female directors on the board to the total number of directors on the board.

3.2.3 Other variables. Certain specific control variables such as the number of board meetings in a year (NBMY), percentage of independent directors on the board (Per_ID), CEO Duality (CEO_D), Tobin's Q (TQ) and firm size are used to control other possible determinants not captured by the dependent variable. The number of board meetings held in a year shows the level of effectiveness, diligence and monitoring ability of the board. As CSR activities are part of business strategies, it is hypothesised to be discussed in every board meeting. Thus, increase in the number of board meeting increases a company's CSR performance and its CSR duties (Giannarakis, 2014). The percentage of independent

directors on the board (Per_ID) is calculated by dividing the total number of independent directors by the total number of directors on the board (Pareek *et al.*, 2019). The independent directors, in respect of their appointments, have no pecuniary relationship with the firm, and thus work in the interest of the varied stakeholders thus promoting socially responsible activities and their disclosures (Pareek *et al.*, 2019).

The CEO duality is measured by a dummy variable, provided with value one if CEO is also the chairman of the board, otherwise zero. The stewardship theory argues that CEO duality increases the performance and decision-making ability of the firms, thus enabling effective and efficient corporate strategies, such as CSR, etc. (Chugh *et al.*, 2011).

The study has used Tobin's Q as market-based financial performance (Sahu and Manna, 2013), which is measured by dividing (Market value of equity + Book value of debt) by Book value of equity and debt. The profitable companies tend to have more freedom and flexibility in regards to their resources to render extensive CSR activities and its disclosures, thus legitimising its existence (Giannarakis, 2014).

The firm size is calculated as the natural logarithm value of the total asset of the firm (Pandey and Sahu, 2019). The extent of a company's size proxies its visibility, as larger companies are under more scrutiny from various stakeholders they tend to undertake more socially responsible activities and provide more disclosures to legitimize their business activities (Pareek *et al.*, 2019) (Table 1).

3.3 Model specification

The study explores the relationship between the variables on the basis of the following model:

$$\text{ESG score}_i = \alpha + \beta_1 \text{GD}_i + \beta_2 \text{NBMY}_i + \beta_3 \text{Per\_ID}_i + \beta_4 \text{CEO\_D}_i + \beta_5 \text{TQ}_i + \beta_6 \text{Size}_i + \mu \quad (1)$$

In equation (1), the firm's ESG score, which is the dependent variable of the study, proxies for the firm's corporate sustainability performance. GD, the independent variable, is represented by the proportion of women directors on the board. The model also takes into

Variable	Acronym	Definition
Corporate sustainability	ESG	A composite score index describing about the disclosure activities of the corporates related to its environmental, social and governance activities
Gender diversity	GD	The proportion of number of female directors on the board to total number of directors on the board
Number of board meetings in a year	NBMY	Total number of board meetings held in a year
Percentage of independent directors on the board	Per_ID	The total number of independent directors on the board divided by the total number of directors on the board
CEO duality	CEO_D	Measured as value 1 if the CEO is also the chairman of the firm, otherwise zero
Tobin's Q	TQ	(Market value of equity + Book value of debt) divided by book value of equity and debt
Firm size	Size	Natural logarithm value of the total asset of the firm

Source: Presented by authors

Table 1. Description of variables

account certain control variables, such as NBMY, Per_ID, CEO_D, TQ and Size, that could have an impact on the dependent variable of the study taken indication from previous literature. β is the coefficient of independent and control variables; μ is the error term; and i is the firm identifier.

The study tries to understand the data property of the variables undertaken by going in for summary statistics, such as mean, standard deviation, maximum and minimum values, etc. The study undergoes certain tests to check and remove the presence of multicollinearity and heteroskedasticity property of the data variables to avoid distorted results, such as pair-wise correlation matrix and variance inflation factor (VIF) test for multicollinearity and Breusch-Pagan/Cook-Weisberg test (Hettest) and information matrix test (Im-test) as observed in White (1980) for heteroskedasticity. Apart from this, the study also undergoes certain tests and analysis to finally determine the selection of best-fit model among the ordinary least square model (OLS), fixed effect model (FEM) and random effect model (REM), such as restricted F test which selects the optimum model to be FEM over OLS, the BP-LM (1980) test which selects REM over OLS and the Hausman (1978) test which recommends FEM over REM.

4. Data analysis and results

4.1 Summary statistics

Table 2 presents the descriptive or summary statistics of all the variables undertaken for analysis in the study. From the results, it can be evidently seen that the average proportion of women directors in the company is 9.90% which is a moderate representation after the amendment made by the Companies Act (2013). The average ESG scores of companies also stand at 22.69 which seem moderate enough in terms of disclosures made by the companies in regard to their environmental, social and governance activities. It is noteworthy that the representation of independent directors on the board of the companies is 50.97, which represents about half the proportion of the board.

Moreover, an increasing trend can be seen in both the disclosure of ESG activities by the sampled companies in terms of their CSR performance over the years (Figure 1). The average level of disclosure of the sampled companies increases from 20.38445 to 26.29868 from the year 2013 to 2019. The growing interest and popularity of the companies in the area of corporate sustainability in the 21st century can be attributed as a reason for the growing trend. The companies are indulging more and more in socially responsible activities and also legitimising themselves by disclosing them to their varied stakeholders.

Another important observation is the growing trend in the appointment of women directors in the sampled companies. Though the proportion still seems small in comparison to their male counterparts, but the increasing trend seems to provide hope in the field of

Variable	Mean	SD	Minimum value	Maximum value
ESG	22.69	12.63	9.09	61.57
GD	9.90	7.77	0	42.86
NBMY	6.22	2.21	4	18
Per_ID	50.97	11.54	0	81.82
CEO_D	0.23	0.42	0	1
TQ	2.56	2.43	0.43	19.13
Size	11.15	1.74	−0.64	15.78

Source: Authors' calculation

Table 2.
Summary statistics

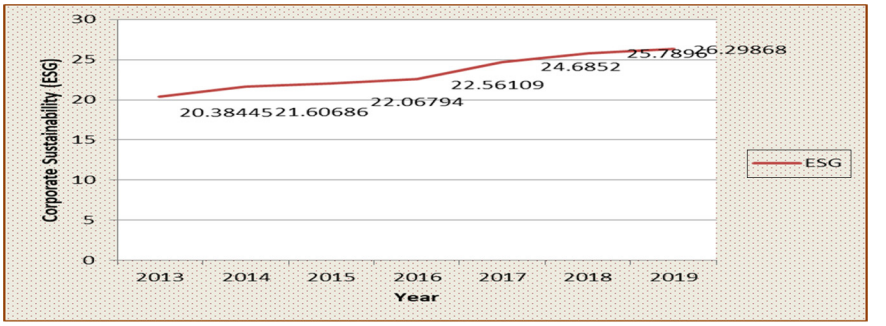

Figure 1.
Trend analysis for corporate sustainability (ESG)

Source: Authors' presentation

women's representation in the corporate world. The proportion of women directors in the companies' board increases from 5% in the year 2013 to 13% in the year 2019 (Figure 2). This change may be attributed to the mandate of appointing at least one women director in the board of companies under section 149 of the Companies Act (2013).

Similarly, the study also observes that the trend for the proportion of independent directors in the firm declines from the year 2013 from 52.69311% to 50.7987% in the year 2016, and further takes a hike to 51.44584% in the year 2019 (Figure 3). Thus, it can be concluded that since the incorporation of the Companies Act (2013), half of the board of the sampled companies consist of independent directors on average.

4.2 Result of the diagnostic tests

The study undergoes certain diagnostics tests such as the VIF and pair-wise correlation matrix to measure and avoid the existence of multicollinearity property among the variables which often hints to flawed results leading to false conclusions.

Table 3 presents the pair-wise correlation matrix with VIF of all the variables undertaken for analysis in the study. The high multicollinearity property exists among the variables if the tolerance value is less than 0.1 or VIF is greater than 10 (Gujarati, 2004). The maximum VIF value of 1.31 from the test signifies the non-existence of substantial multicollinearity property among the variables (Table 3). As far as the pair-wise correlation matrix is

Figure 2.
Trend analysis for proportion of women director

Source: Authors' presentation

Source: Authors' presentation

Figure 3.
Trend analysis for proportion of independent director

Independent variables	GD	NBMY	Per_ID	CEO_D	TQ	Size	VIF
GD	1.00						1.01
NBMY	−0.06**	1.00					1.31
Per_ID	−0.01	−0.32*	1.00				1.12
CEO_D	−0.05	0.17*	−0.10*	1.00			1.05
TQ	0.09*	−0.11*	0.02	−0.14*	1.00		1.09
Size	−0.03	0.38*	−0.15*	0.07**	−0.24*	1.00	1.13

Notes: *denotes 1% level of significance; **denotes 5% level of significance
Source: Authors' calculation

Table 3.
Pair-wise correlation matrix with variance inflation factor

concerned, no such severe correlation between any set of independent variables is evident from the test.

4.3 Empirical evidence from panel data analysis

For the panel data analysis, the study undergoes selection and estimation of the best fit model among the three regression models, namely, OLS model, FEM and REM. The three models lie on different assumptions such as the OLS assumes the intercept as well as the slope coefficients to be the same for all the 212 non-financial sample companies, whereas the FEM assumes that the intercept varies across the companies as it incorporates special characteristics of the cross-sectional units. On the other hand, the REM makes the assumption that the intercept of a specific company makes a random drawing from a large population that varies non-systematically with a constant mean value.

Taking ESG as the dependent variable the study finds the restricted F-test statistic (21.47*) BP-LM test statistic (1,136.25*) and Hausman test statistic (17.41*) to be significant. The restricted F-test chooses FEM over OLS, the BP-LM test selecting REM over OLS and the Hausman test recommends FEM over REM. As a result of these various tests, the study is finally able to select the FEM as the best-fit regression model to establish certain relationship between the variables.

The study also undergoes the Breusch-Pagan/Cook-Weisberg test (Hettest) and Im-test (White, 1980) to measure the existence of heteroskedasticity property among the variables (Table 4). The heteroskedastic property among the variables signifies that the variance of the error terms of regression models does not follow the assumptions or does not have

Dependent variable – corporate sustainability	
GD	0.113* (3.98)
NBMY	−0.203 (−1.54)
Per_ID	−0.182 (−0.76)
CEO_D	0.333 (0.04)
TQ	0.436* (2.62)
Size	5.749* (7.42)
Intercept	−41.482* (−4.84)
F-stat	20.89*
R^2	0.130
Restricted F test	21.47*
BP-LM test	1,316.25*
Hausman Test	17.41*
Hettest	1.94
Imtest	509.81*

Notes: Figures in brackets are *t*-values. Restricted F test is the test for selection between OLS and FEMF $= \sim F_{[(d-1),(n-d-k)]}$ Here, R^2_{UR} stands for goodness of fit of the FEM, R^2_R for goodness of fit of the OLS, *d* for the number of groups, *n* represents the total number of observations and *k* represents the number of explanatory variables. LM test is the Breusch and Pagan's (1980) Lagrange multiplier test which provides selection between OLS and REM. Hausman test is the Hausman (1978) specification test for selection between FEM and REM. Hettest is the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity. Imtest is the information matrix test for heteroskedasticity (White, 1980). *Denotes 1% level of significance
Source: Authors' calculation

Table 4.
Panel data regression results

constant variance, which invalidates the statistical tests of the concerned study. From the analysis, the existence of heteroskedasticity is suggested by the Im-test, which is controlled by the use of robust standard errors during regression analysis.

From the panel data analysis, the study interprets that proportion of women directors in the company (coefficient 0.113) has a positive relationship with the sustainability performance of the company significant at 1% level. Additionally, the profitability of the company measured in terms of Tobin's Q (coefficient 0.436) and firm size (coefficient 5.749) is also seen to have a positive impact on the sustainability performance of the company both significant at 1% level. However, no other variable from the study was found to have a significant relationship with the ESG scores of the sample companies.

5. Results and discussion

The study provides empirical evidence that the diversity on board in terms of gender does have a significant impact on the sustainability performance of the firm. Our findings are in synchronization with various previous literature (Ben-Amar *et al.*, 2017; Alazzani *et al.*, 2017; Al-Shaer and Zaman, 2016) which also project a positive association between GD and various parameters of sustainability. The women directors thus seem to be more sensitive and concerned towards the social and ethical issues of the organisations and are more stakeholder-oriented as compared to their male counterparts (Isidro and Sobral, 2014). The findings of the study are also in line with previous literature (Hart and Ahuja, 1996; Konar and Cohen, 2001; Sarumpaet, 2006), indicating more profitable and bigger firms to have a positive impact on sustainability reporting. The firms, which are thus bigger in size, have a vast audience and stakeholders to respond and report the activities undertaken by them. Additionally, firms that are more profitable compared to their rivals in the market are in a better position in terms of

resources, manpower and capabilities to disclose their financial and non-financial information to the public at large (Iwata and Okada, 2011; Haninun *et al.*, 2018).

6. Conclusion and recommendations

The study is done with a view to evaluate and examine the impact of GD on the sustainability performance of the listed Indian companies. The study takes companies listed in the NSE 500 index as the sample for the study as it consists of top 500 companies which represent about 96.1% of the free-float market capitalization of the stocks listed on the NSE. After excluding banking and financial firms and firms with inadequate data, the study finally undertakes a sample size of 212 firms for the period of 2013–2014 to 2018–2019. The study thus provides empirical evidence that the diversity on board in terms of gender does have a significant impact on the sustainability performance of the firm. The women directors bring a different perspective, leadership styles and non-traditional approaches to the decision-making process of the firm thereby enhancing the capability to respond to the needs of a varied-stakeholder group (Al-Shaer and Zaman, 2016). The women directors are also evidently more sensitive and concerned towards the social and ethical issues of the organisations, therefore more stakeholder-oriented in comparison to male directors (Isidro and Sobral, 2014). The study reveals that firms that are profitable and bigger in size have a positive impact on the sustainability reporting of the organisation. The probable logic behind this may be that the profitable and bigger firms have a large variety of stakeholders to report, and also these firms are more capable in terms of financial resources, skilled manpower and technological advancement to disclose and report about their financial and non-financial matters to the public at large (Haninun *et al.*, 2018).

The study from its findings highlights some theoretical and practical implications for the academicians, policymakers, regulators, etc. From theoretical perspective, the findings of the study are in line with resource dependency theory, which advises that a more diverse board is likely to represent the diverse stakeholders, leading towards better corporate sustainability practices. Empirically, the study from its findings contributes to the existing literature by highlighting the impact of GD on the sustainability performance of the firm. The Indian sector still lacks behind in fulfilling the prescribed recruitment statistics of women directors as still there exist companies with no women directors on the board in spite of guidelines being issued in the Companies Act (2013). In light of these events, the study recommends the recruitment of an ample number of females in the top-notch positions of the board to create a gender-diverse management team to reap the benefits of leadership styles of both genders. The study recommends the policymakers to support the involvement of sufficient women directors on the board so as to expedite sustainable activities in the firm under their management, which is becoming an important area in the 21st century. Thus, the study not only updates the concerned authorities in regards to the status of GD in the corporate world but also provides implications to improve the representation of women directors to uplift the compliance level of economic, environmental and social sustainability disclosures through their efficient participation. The findings of the study can also be used as a reference point for other counties which have laws, regulations and earmarked quotas for women representation on the board.

However, in spite of the above-stated contributions, the study does have certain limitations. First, the finding of the study is limited to the sampled companies and thus caution needs to be undertaken while generalising the results. The results may vary from other studies owing to the nature of data, sample design and the content analysis of reports may vary as they are subject to the authors' discretion. Second, the study only adopted a quantitative approach while accounting for boardroom diversity. Third, as a way forward,

more meditating and moderating variables can be considered such as other board characteristics, financial performance variables, environmental performance variables, etc.

The study, for future endeavours, recommends taking into account the nature and demographic features of the women directors employed in a firm to get an in-depth analysis of the diversity on the board and sustainability. The study also recommends sector-wise classification of the industries to understand the impact of GD in "high-profile" and "low-profile" sectors, respectively. Moreover, the study suggests the inclusion of a weight-based approach for measuring women's participation in the board to avoid the "tokenism" of women directors in the industry. Further, the curvilinear aspect of the relationship between GD and sustainability performance may be analysed to form a cubic curve and provide better explanatory results. The study acknowledges that its findings and thereby drawn inferences are valid only for the Indian non-financial firms.

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